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## AMERICAN POTATO JOURNAL

PUBLISHED BY

THE POTATO ASSOCIATION OF AMERICA

EAST LANSING, MICHIGAN

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## A Comparison of Certified Cobblers From Various Sources

JOHN BUSHNELL, Ohio Experiment Station, Wooster

Certified Irish Cobblers are shipped to Ohio from practically all of the important producing districts. A few years ago, when Early Ohios were of considerable importance in the state, most of the certified seed, both Cobblers and Ohios, came from the Wisconsin-Minnesota-North Dakota region. In recent years the Cobbler has become more popular and certified seed has been received in increasing quantities from New York, Maine, and Prince Edward Island.

As a rule the eastern seed has been of smaller size, more carefully graded, and freer from *Rhizoctonia* than that from the western states. Because of its attractive appearance the eastern seed frequently commands a higher price. The higher price in turn conveys the impression that such seed will give higher yields, and it follows that growers who are looking for the best are inclined to favor this eastern seed.

In three of the past four years, early potatoes have been a very successful crop on the terraces of the Ohio river and its tributaries in southern Ohio. Even in 1930, when the severe drouth injured the crop, potatoes were more profitable than most other crops of the district. Consequently there is an increasing acreage and an increasing interest in potatoes.

At the Washington County Experimental Farm near Marietta, in southern Ohio, work with early potatoes is in progress, and some studies have been started at the University Experiment

Farm at Columbus. One of the experiments of most interest has been a comparison of certified Irish Cobbler seed from various sources.

Samples have been obtained mostly from dealers who are shipping certified Cobblers to Ohio. The seed has been received in the spring, just prior to planting. At planting, in late March or early April, due precautions have been taken to cut the seed to approximately the same size pieces, to plant at uniform spacing, and to have triplicated plots as far as possible. The seed has not been treated, because *Rhizoctonia* is rarely serious in southern Ohio, and has never appreciably reduced the stands at the experimental farms.

The yield to date from these tests as given in the table show a high yield from the New York and Michigan seed, followed closely by that from Maine. The Prince Edward Island sample failed to come up to expectation, in 1931, and the seed from the western states has varied widely, with an average yield below that of the New York and Michigan samples.

All of the samples gave excellent stands. None showed symptoms of virus diseases or *Fusaria*. There has been some difference in the time of emergence of the plants, and the number of plants per hill. In general, rapid emergence and a small number of plants per hill were associated with high yields.

As one result of this experiment a group of Ohio potato growers made a trip this summer to New York to meet the growers who are producing the certified Cobblers that did so well in comparison. Other Ohio growers made a similar trip to Michigan.

Another result of tests of this type is a growing conviction that the production of high-yielding seed potatoes is not merely a problem of eliminating diseases, but also involves the cultural and storage practices. The tests themselves, however, do not adequately answer the questions as to which methods are the best.

The time is here when these questions should be studied critically, just as the question of irrigation in seed production has been studied in some of the western states. It is important to Ohio growers as well as to certified seed producers to know more about the reasons why the New York and Michigan seed gave high yields in Ohio tests.

In Ohio we propose to continue and to enlarge the testing of Cobblers from various sources, and to publish the results. The writer would welcome an opportunity to work in cooperation with certified seed organizations that are in a position to con-

duct experiments on the methods of producing Cobblers for seed.

### YIELD OF COBBLERS FROM VARIOUS SOURCES

Average of Triplicate Plots in Bushels per Acre of U. S. No. 1

SAMPLES FROM	1929 Marietta		1930 Marietta		1931 Marietta		1931 Columbus	
	No.	Yield	No.	Yield <sup>1</sup>	No.	Yield	No.	Yield
Michigan .....	3	384	2	98	1	316		
New York .....			2	97	6	311	3	120
Maine .....			1	86	1	310	1	108
Prince Edward Island			1	87	1	271	1	110
North Dakota .....	3	369	2	91			1	116
Wisconsin .....			1	75	1	269	1	132
Minnesota .....			1	66	1	250		

<sup>1</sup>Total yield instead of grade No. 1 in 1930.

## Drouth Keeps Potatoes Alive

C. L. Fitch, Ames, Iowa

Not since 1928 have we had anything like universally good conditions for the production of potatoes in northern states and in the cornbelt potato area. Over most of this territory, there has been a tremendous amount of drouth and heat during 1929 and especially during 1930 and 1931.

Many farmers and many specialists have noticed that potatoes have lived a remarkably long time in seasons of drouth as compared to their length of life in moist seasons like 1928.

Especially in 1930, we had here and there in the cornbelt, men, who having sprayed their potatoes a record number of times up to eleven and even fifteen times, have thought that it was the boro which had made their plants mature so late. We have had plenty of fields which kept right on growing until frost came, which in many places was delayed until the middle of October or longer; and such thorough-going spraymen have thought it was their management and persistence that got the

plants through the trying times and made a good crop in spite of everything.

There is no doubt that there is much truth in what these men have thought.

However, they should remember that drouth alone tends to keep potato plants alive.

To the growers of potatoes under irrigation, this is axiomatic. Those men who grow potatoes on mountain slopes where the grade is steep enough can send little rills of water down the rows rapidly without soaking up the tuber beds or over-soaking the root bed—quite as good or even better conditions for the production of potatoes than along the Canadian border in our northern and northeastern states; but the men who grow potatoes under irrigation where the slope is slight and the temperature very high for this crop, as is the case for instance in the Greeley district of Colorado, have to become students of the point under discussion. They irrigate their alfalfa fields before plowing them for potato production, but they are very careful about irrigating them after the crop has started to grow and before cool weather has come and plants shade the ground.

They have learned that potato plants will stand lots of drouth and heat early in the season. Experienced irrigators often will not run any water even if the plants turn almost black and even if some of the leaves drop like rags and burn in the sun. They know that a soaking at this time often may kill the crop or a good many plants in it.

When they do start to irrigate, they run the water only down every other row and run it as rapidly as the slope permits.

It has been established (1), and no doubt is a basic principle of growth of the potato plant that the hyphae of fusaria appear in the ducts strictly in proportion to the temperature and the degree of soaking, and that with more soaking, the temperature must be cooler if these deadly enemies of the plants are to be kept out and vice versa that if the temperatures of the soil be high, the ground must be relatively dry or the hyphae will appear. It would be interesting and perhaps valuable to know whether other diseases may not be influenced somewhat along the same rule.

This year in my state, we have had this experience: the winter of 1930 and 1931 was so dry that even our good subsoils were to a large extent depleted of moisture. We did not get enough rain in the growing season of 1931 to make this up. We had many cases where the corn roots were all in the top foot of soil. Under such circumstances the potato plants seemed to suffer severely from lack of cooling from the subsoils and



potato roots were confined far too close to the surface. Early in September, we had rain sufficient to penetrate perhaps a foot into our clay loam dirt, and then afterward, a period of extreme heat. Under these circumstances, potatoes dropped dead as if they had been killed by fire.

Where potatoes were in shallow loam, known to be over impervious clay so that their roots were doubly confined to the upper soil, the potato plants died even more quickly.

The growers of potatoes under irrigation in the warm and relatively flat regions have extended their observations to the effect of water on the potato plants at the close of the season. After having been exceedingly careful to soak the plants as little as possible, and to get the water to the ends of the rows, during all the growing season and sometimes having irrigated only every other row throughout the season, alternating one time with the next, down different middles, when harvest time approaches, they will give the potatoes a good soaking. To a man, they have observed that this soaking will hasten the change from dark green to light green or yellow green in the leaves, and bring the crop and the leaves quickly to maturity. In other words, they would say that water must be used sparingly if it is not to ripen or even kill potato plants, and that the withholding of water and its chary use tends to keep potato plants alive and healthy.

It seems to me that there is room for a lot of careful experiment station work on the most profitable number of times to use bordo mixture for the keeping of potato plants alive. The beneficial effects of bordo and the life prolonging effects of drouth should be separated experimentally, and growers be given a basis for calculating the most remunerative number of times to use bordo mixture.

1. Fitch, C. L. Studies of Health in Potatoes. Colorado Experiment Station Bulletin 216, 1915.

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## Colorado Potato Grower Digs World Record Crop

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Setting a new world record for Bliss Triumph potato production, John Gredig of Del Norte has just dug 64,144 pounds or 1,069.06 bushels of these potatoes to a measured acre, despite a generally unfavorable season.

Good seed, a well prepared seedbed and late digging which allowed the potatoes to fully mature had much to do with the high yield, Gredig believes, according to a report to the Colorado Agricultural College by A. A. Goodman, Rio Grande county extension agent, who assisted in supervising the weighing of the potatoes when they were dug.

Gredig obtained his seed from Teller county, Colorado, where Tunis Hanna of Del Norte obtained the seed which gave him a yield of 664 bushels per acre last year. Hanna dug much earlier in the season, however, and his yield was cut down considerably by a summer hail storm.

Gredig obtained his yield on black bottom land that had been in lettuce during 1928, 1929, and 1930, and that had been in native hay previously for 20 years. Last fall he plowed the land to a depth of 10 inches. He used a plow with a pulverizer attachment, which left the soil in a fine condition. Last spring the land was double disced, and harrowed once before planting, and again afterwards.

In planting, whole seed treated with organic mercury was used, and 1,400 pounds of seed were planted per acre. The seed were planted on April 25 to a depth of about 6 inches.

"The potatoes run nearly all of uniform size and of No. 1 quality," Goodman says. "Many of the hills averaged 20 market potatoes. The first lot graded 256 sacks of market potatoes and only 6 sacks of culls. The measured acre was in a field of five acres of Bliss Triumphs, all of which will yield practically the same."

The digging and weighing were in accordance with the rules of the famous "Colorado 600-Bushel Club," which is sponsored by the extension service of the Colorado Agricultural college. Those who supervised the digging and weighing were James Duncan, H. H. Torbitt, cashier Rio Grande State bank; P. B. Sutherland, manager Del Norte Potato Growers' association, and County Agent Goodman.

This world's record yield entitles Gredig to membership in the 600-bushel club. He is the first to win membership in this club this year, according to C. H. Metzger, associate horticulturist at the college.

Ed. Faast of Montrose, Colo., previously held the record for high yield of Bliss Triumphs, with 672 bushels from a measured acre. Gredig's yield is not a great deal below that of L. G. Schutte, another Rio Grande county farmer, who raised America's record crop of 1,145.17 bushels of Brown Beauties to the acre in 1929.

—News Notes from Colorado Agricultural College.



## Crop and Market News

### Crop Prospects Increased; Prices Low

(Contribution from Bureau of Agricultural Economics)

The condition of the late potato crop as of October 1 and reported probable yields indicate a total 1931 production of 374,751,000 bushels, compared with the estimated 1930 crop of 343,236,000 bushels. Over much of the northeastern and central sections of the country, September was quite favorable to the growth of the crop. Many localities received the benefit of much-needed rain, which afforded some relief from drought conditions and permitted the crop to take on added bulk, light frosts had occurred but no killing frosts were reported in major locations up to October 1.

The increased size of the crop since the September 1 forecast is found principally in the eastern and central surplus late-potato states. Prospects in the western states, for the most part, remain practically unchanged from a month ago, the water shortage being a limiting factor. Production in the 19 surplus late states is now forecast at 255,372,000 bushels, or nearly 9% more than last year. The 16 deficient late states expect 73,734,000 bushels or 3% more than a year ago. The yield per acre for the country as a whole is given as 106.9 bushels, compared with 108.4 bushels in 1930 and a 10-year average of 110.6 bushels.

**WHITE POTATOES**—Forecasted Production, October 1, 1931, Compared with 1930 Estimates by Groups of States.

Group	Acreage		Yield per acre		Production	
	1930	1931	1930	Indi- cated 1931	1930	1931 forecast from condition October 1
	1,000 Acres		Bushels		1,000 Bushels	
United States .....	3,167	3,506	108.4	106.9	343,236	374,751
35 Late States....	2,753	3,010	111.4	109.3	306,569	329,106
19 Surplus .....	2,045	2,250	115.0	113.5	235,078	255,372
4 Eastern ....	597	639	153.4	170.9	91,551	109,190
6 Central ....	1,055	1,176	69.6	76.9	73,413	90,418
9 Western ....	393	435	178.4	128.2	70,114	55,764
16 Deficient ....	708	760	101.0	97.0	71,491	73,734
8 Eastern ....	232	241	133.4	133.8	30,951	32,253
8 Central ....	476	519	85.2	79.9	40,540	41,481
13 Southern .....	414	496	88.6	92.0	36,667	45,645

Harvesting was progressing rapidly in most parts of the country and was nearly completed in some States. Carlot movement, however, was still lagging considerably behind last year's corresponding figure. Total shipments by rail and important boat lines from the 19 leading states by October 10 were about 32,750 cars, or 30% less than to the same time last year. Idaho has shipped considerably more potatoes than during the early part of last season, but such important States as Maine and Minnesota have fallen far short of their 1930 figure to date. The season was closing in New Jersey with the rail shipments of only 5,100 cars, or 1,500 less than for the 1930 season.

Prices have been extremely low everywhere. Shippers of Green Mountains in northern Maine were getting only 40c per 100 pounds sacked. The western New York price on Round Whites was 60c-65c, compared with Green Mountains on Long Island at 65c-75c. North Central States quoted most sales at 50c-60c per 100 pounds. Western Nebraska shipping points held around 45c on Bliss Triumphs. The southern Colorado market ranged 48c-60c and the northern part of that State reported most sales of Colorado standard grade potatoes at 60c. Southern Idaho Russet Burbanks were returning 50c-60c cash-track, with Rurals at 35c. Shippers in the Yakima Valley of Washington received \$12-\$14 per ton of sacked Russet Burbanks.

Jobbing sales of several varieties of potatoes in eastern markets were made mostly within a range of 75c-\$1.50 per 100 pounds. The Chicago carlot market in mid-October quoted arrivals from North Central States generally at 85c-90c, and Nebraska at \$1.10. Best Idaho Russets were selling in Chicago at \$1.25-\$1.60 per 100 pounds, depending on the size of stock. "Futures" for October delivery in Chicago averaged \$1.35 on Idaho Russet Burbanks and 80c on Round Whites. Maine Green Mountains for October delivery in Boston averaged 78c. The corresponding prices of these three kinds of potatoes for January delivery were \$1.60 and \$1.02 and \$1.03, respectively.

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The following notes are summarized from comments of State statisticians on or about October 1:

**NEW ENGLAND:** Probable yields indicate that potato yields in the New England States outside of Maine are somewhat better than seemed likely a month ago. Rainfall in September was very heavy in northern New England, totalling well over four inches. In southern New England, particularly

Rhode Island and Connecticut, September was quite dry and reports of rot damage are correspondingly less prevalent. In Aroostook County, rainfall in September was extremely heavy with 5.33 inches at Presque Isle compared with a normal of 2.93 inches. Digging has made slow progress on account of wet weather and the difficulty of financing the operation with potatoes selling at such low prices, approximately fifty cents per barrel. Examination of fields being dug shows that set was generally light and that growth was terminated prematurely by late blight and also that rot has developed considerably, aided largely by the excessive September rains.

**NEW YORK:** Favorable rains early in September in most parts of the State made sufficient moisture available to mature a good crop. However, the extremely hot wave in mid-September, such as has not occurred for many years, caused rapid dying of the vines, which was unexpected, and thus curtailed growth. Late blight had started in northern New York and was common from about the location of Utica eastward, accompanied by some rot. With the recent hot weather and adequate moisture, it seems probable that such rotting as may occur will take place rapidly, leaving a clean crop for harvest, which will be completed unusually early unless wet weather interferes. While there have been local frosts over much of the State, there have been no hard freezes to date.

**MICHIGAN:** Heavy rains during the latter half of September caused some improvement in the late crop outlook, particularly for the northern half of the State where growth was less advanced. Further improvement in yields in this section now depends largely upon absence of frost. For the southern half of the State, in sections where the drouth was most severe, the September rains were generally too late for any pronounced improvement. On low, poorly drained fields there has been some damage from rotting. The heavy rains, coming after a period of extreme drouth, are causing some second-growth and ill-shaped tubers.

**WISCONSIN:** The unusually favorable month of September has brought a notable increase in production, particularly in the commercial areas of central Wisconsin, as well as in late potatoes in the southern two-thirds of the State generally. Find that in the Antigo-Rhineland region and northward there has been harvested one of the finest late potato crops in years. Yields are good and the quality is high. It happens that the early potatoes in this area, which are becoming more and more important, are relatively less satisfactory, and the

yield of earlies was rather poor. In the area north of Antigo, however, there is a larger percentage of late stock and the quality is exceptional. With September perhaps the most favorable growing month in many years, these late potatoes have had an unusual opportunity to develop. On October 1, the hills normally had two or three marketable potatoes of fine quality plus perhaps six or eight that were under size for U. S. No. 1's. The vines were all green and growing conditions excellent. This is one time when late potatoes have made a definite and rather spectacular recovery after the record heat and drouth of mid-summer which is supposed ordinarily to make it impossible for potatoes to make such a recovery. Small patches of potatoes, especially where early varieties were grown, have not turned out so well but the recovery in the well handled late fields in commercial areas is very marked.

**MINNESOTA:** For potatoes, the weather during September was none too favorable. On the last two days of August killing frosts were reported in several large areas in the State, which no doubt were not entirely reflected in the September 1 report. The first ten days in September were very hot and dry, which was especially unfavorable to potatoes. Potato digging is now in full swing. Yields in the Valley are fairly good, and in the northern part of the State, very good. Non-commercial districts not so good. Quality, under the new grade, is low.

**NORTH DAKOTA:** Condition shows a material improvement due to favorable weather. Early September heat hastened the development of the crop. Harvest is probably 50% to 60% complete. No killing frosts occurred in September, and vines have matured rapidly in commercial districts aided by favorable temperatures and moisture conditions. By October 1, individual hills showed usually two to three good sized tubers, with three or four undersized. Buyers are grading closely, owing to a more rigid inspection and the percentage of culls is much greater than in previous years.

**NEBRASKA:** Late potatoes in the western Nebraska commercial potato section made some improvement. Elsewhere there has been no change since September 1. There was a long period of drouth in western Nebraska which was broken by rainfall about the middle of August. The early potatoes in western Nebraska had advanced far enough that the drouth checked growth. Rains coming about the middle of August renewed growth and the results are that the early potatoes made a considerable second-growth. The later plantings fared

better and are going to make fairly satisfactory yields of good quality. The early potatoes in the Kearney district made excellent yields and are about the best crop ever produced. Elsewhere in Nebraska yields are generally extremely poor, ranging from practically nothing to fairly good yields. The dry weather and extreme heat came about three weeks earlier than usual and simply burned the vines at about the time when the tubers should have made the greatest advancement.

**COLORADO:** Potato condition is very low, ranging on irrigated land in important districts from 20% to 66%. **Western Slope:** Condition is the best of any commercial district. Hot, dry weather reduced yields with a large percentage of the crop going No. 2's and lower. The early potato crop was very good. Harvest is starting. **Northern Colorado:** Less than half a crop is expected. Hot, dry weather, and shortage of irrigation water reduced yields. Quality is good but size small. Because of scab and flea beetle, it is seldom No. 1 potatoes are produced in this district. **San Luis Valley:** Potatoes in this district have the lowest condition on record. The Valley has been practically out of water all summer. Hot weather also damaged the crop. Abandonment will be very heavy, and many fields will only be harvested for seed. The percentage of seed and culls will be greater than usual. Harvest is well along. **Other Districts:** All dry land potatoes are very poor. **Custer County,** where 6,000 acres of dry land potatoes were planted, is nearly a failure.

### Commercial Early Potato Production, 1931 Season

Preliminary estimates of the commercial early potato crop indicate a 1931 production about 6% larger than in 1930. Prices, however, averaged so low—about 43% below those of the previous year—that the value of the crop was estimated to be only three-fifths as great as in 1930. Preliminary production and price data for the respective groups of States, from 1928 to 1931, are shown in the following table.

While plans for the 1932 season are by no means well-defined at this time, owing to uncertainty of credit and to other unsettled factors, there are indications in the early reports of southern growers that decreases will be made in the 1932 early potato acreage. From some of the southernmost States, the reports point to rather sharp decreases if growers' present intentions materialize. Many, however, are undecided and definite planting plans will depend more than usual upon what financing arrangements can be made.



Group	Production 1,000 Bushels			
	1928	1929	1930	1931
Fall .....	18	38	51	245
Early (1) .....	4,486	3,576	4,010	4,513
Early (2) .....	10,428	5,966	9,153	12,400
Second Early .....	26,385	17,922	19,433	18,655
Intermediate .....	12,051	7,188	10,357	9,873
Total All Groups .....	53,368	34,690	43,004	45,686

Group	Dollars Price Per Bushel <sup>1</sup>			
	1928	1929	1930	1931
Fall .....	\$1.42	\$1.05	\$1.80	\$1.05
Early (1) .....	1.53	1.72	1.75	1.21
Early (2) .....	.69	1.33	1.30	.63
Second Early .....	.44	1.13	1.05	.53
Intermediate .....	.38	1.39	.84	.58
Total All Groups .....	.57	1.28	1.12	.64

Group	Farm Value 1,000 Dollars			
	1928	1929	1930	1931
Fall .....	26	40	92	257
Early (1) .....	6,854	6,160	7,018	5,475
Early (2) .....	7,212	7,963	11,905	7,860
Second Early .....	11,554	20,210	20,496	9,941
Intermediate .....	4,551	10,008	8,652	5,767
Total All Groups .....	30,197	44,381	48,163	29,300

<sup>1</sup>Average seasonal price paid to growers.

### CHICAGO MERCANTILE EXCHANGE

Continued bearish information and weak spot markets caused potato futures on the Chicago Mercantile Exchange to drop still lower during the first half of October. Only the covering of previously sold hedges aided in supporting the weakening market.

All deliveries weakened except January Idahoes which re-

ceived better support near the close. October Idahoes were off 7c from the close of September, Januaries up 1c; October round whites off 2c, Januaries off 9c; October Green Mountains off 7c, Januaries off 15c. Closing prices, Oct. 15, were: Idahoes, October \$1.35, January \$1.57; round whites, October \$.90, January \$1.02; Maine Green Mountains, October \$.75, January \$1.00. All prices are per cwt., Idahoes and round whites delivered Chicago and Green Mountains delivered Boston.

The monthly government estimate as of October 1 recorded a prospective increase in production over the September 1 figures and the markets continued under pressure. Cold weather appears to be the only immediate hope for the markets, most traders say. The quantity of small potatoes on the market also is tending to restrict buying.

Sales to the exchange totalled 444 cars in the half month period, the October commitment dropped steadily, while Januaries climbed. Four cars of Idaho potatoes were delivered and two cars of Maine potatoes were delivered in Boston on the exchange contracts.

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## Notes

### SOUTH JERSEY CERTIFIED SEED CROP BEST EVER

The slightly over 800 acres of certified seed potatoes being grown in Salem and Cumberland counties in southern New Jersey this fall are presenting a better appearance than any previous crop. Not only is the appearance of the crop uniform on many of the farms where the certified crop is being grown but the state inspector's report shows that there is uniformity from a disease free standpoint. In practically all the fields there is no more than a trace of any of the degenerative diseases. While there have been more favorable weather conditions for the growth of the crop there has been enough rainfall to make a crop that appears to be better than the average crop. Digging will not get under way before the last week in October so it is impossible to say at the present time just how good the crop will be. A heavy rainfall occurred from a week to two weeks after it was planted which carried the crop along well during the latter part of the summer when another heavy rainfall provided moisture to finish the crop.

Practically all of the acreage in the two South Jersey counties is Cobblers. The seed for most of this acreage is of Certified Prince Edward Island source, although some of it is of Maine origin.

This certified seed potato industry is confined to the general farming sections of Salem and Cumberland counties. It is

grown on farms where a commercial or seed crop is grown the early part of the season and where dairy and canhouse tomatoes furnish other sources of income. The crop is planted from the 25th of July through the first week in August. By this method the crop is made immature by being killed by frost, and the users of the seed believe that this adds to the vitality of it. In most cases the seed crop is the only crop grown on that particular piece of ground during the year. A cover crop of rye or wheat is turned under during the late spring for the seed crop and the ground is kept fallow during the balance of the season until the seed crop is ready for it.

The industry started in these South Jersey counties in 1919 when there were a little over 150 acres entered for certification. Since that time the acreage has fluctuated from 400 to 1,000 acres but has in recent years averaged a little over 600 acres.

The bulk of the seed crop that is sold from these farms is used in the famous Central Jersey potato belt. Many growers in that district feel that it is a better plan to use half South Jersey seed and half northern seed than to depend entirely on one or the other of these sources. The Southern Jersey seed starts a little slower in the spring of the year and matures a little later, giving the Central Jersey grower a little longer harvesting season and a second chance at the weather which is sometimes unfavorable during June. The greater portion of the acreage of the commercial crop planted in Salem and Cumberland counties is South Jersey certified seed.

Two years ago a seed potato marketing organization was formed by the seed growers to handle a part of the crop. Through the organization the growers contract with two of the largest Central Jersey dealers to dispose of their crop for them. While this organization, which is known as the Kandle Seed Potato club, is just getting started, it appears to be a move in the right direction that will stabilize the marketing of this crop.

—D. M. BABBITT.

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## MICHIGAN

October and November is the open season for potato shows in Michigan. Despite low prices and drought reduced yields, there seems to be no waning of interest in these events. At Marquette, October 20-22 the Upper Peninsula Potato Show exceeded in quality of samples and number of entries its displays of 1929 and 1930. The Top O' Michigan Show held at Gaylord, October 28-30, had 361 entries and according to the judge, Professor John Tucker of Ottawa, Canada, the quality of exhibits was excellent.

Russell Tennant of Manistique was the outstanding winner at the Upper Peninsula Show. With White Rurals he won first in the open class of this variety, first in the certified seed class and sweepstakes of the show. In the Premier Grower contest, John Delongchamp, Champion, was awarded first place for the Upper Peninsula. His yield of certified Green Mountains was 538 bushels per acre and the market quality of his field run potatoes surpassed that of the 17 other contenders.

At the Gaylord show, 122 samples of Russet Rurals were entered in the 32-tuber open class. Frank Guy, Pellston, was awarded first place in this class and sweepstakes prize for the show. Pearl Bonter, Pellston, won first with Russet Rurals in the certified class and was pronounced the Premier Grower for the Top O' Michigan district. His yield was 376.5 bushels per acre.

Other district shows to be held are the Western Michigan Potato show, Reed City, and the Thumb of Michigan show, Mayville, November 4-6, and the Southwestern Michigan Potato show at Kalamazoo, November 16-18. The State Potato show held at Michigan State college, February 1-5, 1932, will determine the State Premier Potato Grower and the best potato showman.

—H. C. M.

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## NEW YORK

Potato harvest was about complete on October 24th in western New York. Weather was ideal throughout the period October 1 to 24 and tubers went into storage clean and dry. Because of the late frosts and long growing season, many fields were dug before the stalks were entirely dead and before the skin on the tubers was well suberized. The result may mean an abnormal amount of shrinkage in storage. Yields ranged around 150 to 250 bushels per acre in the better cared for fields.

A field survey by the College of Agriculture of tuber defects in over 100 fields in 10 counties of western New York indicate that tuber injury from millipeds and scab gnats may be fully as prevalent and serious as that from scab and wireworms. A study of the relation of maturity and methods of harvesting to mechanical injury is now being made.

The annual convention of the Empire State Potato club will be held in Rochester on January 6 and 7. The potato and trade show will be held in Convention Hall while the meetings are scheduled in Hotel Seneca. The committees on program exhibits and trade show are now at work.

—E. V. HARDENBURG.

## Review of Recent Literature

**Hastings, R. C.** Grade Defects of Potatoes. How to Avoid and Eliminate Them. North Dakota State Seed Department Bulletin 21:1-35. August 1931.

North Dakota potatoes are now marketed under a compulsory labeling law passed by the legislature in 1931. This bulletin by the use of excellent illustrations and descriptions is designed to instruct the grower and shipper of potatoes in the way of proper grading to recognize and eliminate tuber defects. The law requires that all containers in which potatoes are shipped must be labeled "unclassified" or with a specific grade designation. Official grades or designations consist of U. S. No. 1, U. S. No. 2, U. S. Fancy, North Dakota Extra No. 1, North Dakota Certified Seed Grade, and Unclassified.

Bruises, cuts and resulting dry rots have heretofore totaled about 70 per cent of all grade defects found in North Dakota inspected shipments. A survey behind fifty diggers in the fall of 1930 showed an average of 38% of the tubers bruised by the digger. By far the greatest injury occurs in dropping from the elevator apron to the rear attachment. The bulletin shows

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various ways of reducing this injury by padding or otherwise adjusting the digger equipment.

—E. V. HARDENBURG.

### ANNUAL MEETING


December 28, 29, 30, 1931.

The eighteenth annual meeting of the Potato Association of America will be held in New Orleans, December 28-30, 1931. The meeting place will be in room 19, Gibson Hall, Tulane University. Headquarters for the association will be at the De Soto Hotel.

Papers and discussions dealing with the most recent developments in potato production and marketing will be given. On Wednesday morning, December 30th, the Potato Association of America will hold a joint session with the American Phytopathological Society for the discussion of potato diseases and their control. The business meeting of the association will be held Wednesday afternoon.




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**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.**

Of American Potato Journal, published monthly at East Lansing, Michigan, for October, 1, 1931.

State of Michigan } ss.  
County of Ingham }

Before me, a Notary Public in and for the state and county aforesaid, personally appeared H. C. Moore, who having been duly sworn according to the law, deposes and says that he is the Editor of the American Potato Journal and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher--Potato Association of America, East Lansing, Michigan.

Editor--H. C. Moore, East Lansing, Michigan.

Managing Editor--

Business Manager--

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given).

Potato Association of America, East Lansing, Michigan.

John S. Gardner, Lexington, Ky.

J. R. Livermore, Ithaca, N. Y.

H. C. Moore, East Lansing, Mich.

John Bushnell, Wooster, Ohio.

F. M. Harrington, Bozeman, Mont.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state). There are no bondholders, mortgagees, etc.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholders or security holders appears upon the books of the company as a trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities, in a capacity other than that of a bona fide owner and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is--(This information is required from daily publications only).

H. C. MOORE, Editor.

Sworn to and subscribed before me this 27th day of October, 1931.

B. A. FAUNCE, Notary Public.

(My commission expires April 17, 1934.)

Form 3526.--Ed. 1924.